APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,280	10/03/2003	Raghunath Balakrishna	1014-069US01/JNP-0311	3481

28863   7590   08/22/2007
SHUMAKER & SIEFFERT, P. A.
1625 RADIO DRIVE
SUITE 300
WOODBURY, MN 55125

EXAMINER
CLOUD, JOIYA M

ART UNIT	PAPER NUMBER
2144	

MAIL DATE	DELIVERY MODE
08/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/678,280	BALAKRISHNA ET AL.
	Examiner	Art Unit	
	Joiya M. Cloud	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 October 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-55</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-55</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 October 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>03/09/2007, 01/12/2004</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the application filed on October 03, 2003. Claims 1-55

represent Synchronizing state information between control units.

Information Disclosure Statement

2.   The information disclosure statement (IDS) submitted on 01/12/2004;

03/09/2007; is in compliance with the provisions of 37 CFI~ 1.97. Accordingly, the information

disclosure statement is being considered by the examiner.

3.   ## Objections

        Claim 55 is objected because claim 55 is dependent upon itself. Appropriate correction is

required. For the purposes of prosecution, Examiner will interpret claim 55 as being dependent

from claim 54.

Double Patenting

4.   Claims 1-13 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claim 1 of pending Application

No. 10/357,483. Although the conflicting claims are not identical, they are not patentably

distinct from each other because the differences between the two pending applications are minor

wording, which do not change the scope of the invention. Refer to the below observation for

variations of limitations in claims 1-13 of the instant application and claim 1 of the pending

application.

This is a provision obviousness-type double patenting rejection because the conflicting

claims have not yet been patented. Examiner submits that claim 1 of the instant application

(10/678,280) contain(s) every element of pending application and as such anticipate(s) claim(s) 1

of pending application (10/357,483) submitted 05/03/2007.

Instant Application 10/678,280

Claim 1.   *A method comprising: managing state information within a primary control unit;*

and communicating changes to the state information to a standby control unit prior to

communicating the changes to a consumer of the state information.

Pending Application 10/457814

Claims 1.   *A computer implemented method comprising: receiving with a processor, vent*

messages that indicated a change to state information; ***managing,*** *with the processor,* ***the state***

information *within a temporally-linked and heirarchically ordered data structure stored within*

a computer-readable medium, wherein the data structure comprises a plurality of objects that

include hierarchical pointers and temporal pointers, and wherein managing state information

comprises storing the state information within the objects, setting the hierarchical pointers to

link the objects in accordance with a hierarchy representing relationships of the event messages,

and setting the temporal pointers to link the objects in accordance with an order in which the

event messages are received; and communicating, with the processor, changes to the state

information to a consumer comprises traversing the data structures in an order determined in

*accordance with the hierarchical pointers and temporal pointers, and **delivering state change***

messages to the consumer in accordance with the order.

(Note: The substantial difference between claim 1 of the instant application and the

pending application include "communicating changes to the state information to a *standby*

control unit prior to communicating the changes to the consumer. Examiner submits that

such an intermediary control unit is obvious in a network environment in which

communication from one node to another node takes place. (i.e. a communication device

A) transmits data to the communication device B), this communication is routed via a

server of some sort) prior to reaching the destination device B). Therefore, the elements of

claim 1 as recited in the instant application are thus contained in claim 1 of the pending

application).

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

6.   **Claims 1- 55** are rejected under 35 U.S.C. 102(e) as being anticipated by Cho et al. **(U.S. Publication No. 2004/0073646 A1, hereinafter Cho).**

As per claim 1, Cho teaches a method comprising managing state information within a primary control unit **(Figure 10, item 910)**; and communicating changes to the state information to a standby control unit **(Figure 10, web server, item 940)** prior to communicating the changes to a consumer **(Figure 10,item 960)** of the state information **(Figure 10 and paragraph [0065], where state information is status information).**

As per claim 2, Cho teaches wherein communicating changes to the state information to a standby control unit comprises communicating changes to the state in accordance with an order that requires the changes to be communicated to the standby control unit prior to communicating the changes to the consumer of the state information **(paragraph [0066] and Abstract).**

As per claim 3, Cho teaches wherein managing state information comprises managing state information within a temporally-ordered data structure **(Figure 3)**, and wherein communicating changes to the standby control unit comprises replicating the temporally-ordered data structure within the standby control unit **(Abstract, Figures 2 and 3 and paragraph [0030]).**

As per claim 4, Cho teaches wherein communicating changes comprises communicating changes to the state information to the consumers in accordance with the data structure **(paragraph [0058]).**

As per claim 5, Cho teaches wherein managing state information comprises utilizing a commit proposal and a commit marker to identify a portion of the state information **(where the**

commit proposal and the commit marker are the latest information and the previous information respectively, see Abstract, paragraph [0050]).

As per claim 6, Cho teaches wherein utilizing a commit proposal and a commit marker comprises: setting the commit proposal to identify a most recent object of the temporally-ordered data structure that has been communicated to the consumer; and setting the commit marker to identify a most recent object of the temporally-ordered data structure that has been communicated to the consumer and for which an acknowledgement has been received from the consumer **(Abstract)**.

As per claim 7, Cho teaches further comprising setting a flag that indicates to the consumer that the commit proposal has been set **(paragraph [0051], [0052])**.

As per claim 8, Cho teaches further comprising resetting the commit marker to the object identified by the commit proposal in response to receiving the acknowledgement **(paragraph [0052] and [0059])**.

As per claim 9, Cho teaches further comprising:

replicating the commit proposal and the commit marker to the standby control unit; and

communicating a portion of the replicated temporally-ordered data structure that is bounded by the replicated commit proposal and the replicated commit marker to the consumer from the standby control unit in the event the primary control unit fails **(paragraph [0035], and [0041])**.

As per claim 10, Cho teaches, further comprising issuing a communication from the primary control unit to cause the standby control unit to set the replicated commit proposal to identify a most recent object of the replicated temporally-ordered data structure that has not been acknowledged by the consumer **(paragraph [0060], [0068] and [0035])**.

As per claim 11, Cho teaches issuing a communication from the primary control unit to cause the standby control unit to set the replicated commit marker to identify a most recent object of the replicated temporally-ordered data structure that has been communicated to the consumer and for which an acknowledgement has been received from the consumer (paragraph [0060] and [0035]).

As per claim 12, Cho teaches wherein issuing the communication to cause the standby control unit to set the replicated commit marker further causes the standby control unit to set the replicated commit marker to the object identified by the replicated commit proposal in response to receiving the acknowledgement (paragraph [0060], [0067] and [0035]).

As per claim 13, Cho teaches wherein utilizing a commit marker and commit proposal further comprises deleting a least recent object of the temporally-ordered data structure that is not bounded by the commit marker and the commit proposal (paragraph [0060] and [0035]).

As per claim 14, Cho teaches wherein managing state information comprises storing the state information within a set of objects.

As per claim 15, Cho teaches receiving event messages indicating changes to the state information; and linking the objects of the data structure in accordance with an order in which the event messages are received to form a temporally-ordered data structure ().

As per claim 16, claim 16 is substantially the same as claim 3 and thus rejected for the same. Furthermore regarding encoding a commit proposal and a commit marker within the temporally-ordered data structure to identify the portion of the state information communicated to the consumer (paragraphs [0067]-[0069]).

As per claim 17, Cho teaches wherein the data structure comprises a plurality of objects, and wherein maintaining state information comprises storing the state information within the objects.

As per claims 18 and 19, claims 18 and 19 are substantially the same as 6 and 7 and thus are rejected using similar rationale.

As per claim 20, Cho teaches receiving an update request from the consumer (paragraph [0059] and [0066]); identifying a second portion of the temporally-ordered data structure that contains objects more recent than the object identified by the commit proposal; and communicating state data associated with the second portion of the temporally- ordered data structure to the consumer in response to the request (paragraph [0058]).

As per claim 21, Cho teaches further comprising updating the commit proposal to identify the most recent of the identified objects of the temporally-ordered data structure (paragraph [0059] and [0066]).

As per claim 22, Cho teaches receiving an acknowledgement from the consumer; and updating the commit marker to identify the object identified by the commit proposal in response to the acknowledgement (paragraph [0059],[0067], [0068] and [0066]).

As per claim 23, Cho teaches further comprising communicating changes to the state information to a standby control unit before communicating the changes to the consumer.

As per claim 24, Cho teaches wherein communicating changes to the state information to a standby control unit comprises communicating changes to the state in accordance with an order that requires the changes to be communicated to the standby control unit.

As per claim 25, Cho teaches receiving event messages indicating changes to the state information; and

linking the objects of the data structure in accordance with an order in which the event messages are received.

As per claims 26-41, claims 26-41 list substantially the same elements as claims 1-25 and thus are rejected using similar rationale.

As per claim 42, Cho teaches a consumer; a memory to store state information; and a control unit to maintain the state information within a temporally-ordered data structure, wherein the control unit communicates a portion of the state information to the consumer, and encodes a commit proposal and a commit marker within the data structure to identify the portion of the state information within the temporally-ordered data structure **(Figures 3 and 10).**

As per claims 43-50, claims 43-50 are list all the same elements as claims 1-25 and thus are rejected using similar rationale.

As per claims 51-55, claims 53-55 list all of the same elements of claims 1-13 but in computer readable medium form and thus are rejected using the same rationale as used in rejected the method of claims 1-13.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joiya Cloud whose telephone number is 571-270-1146. The

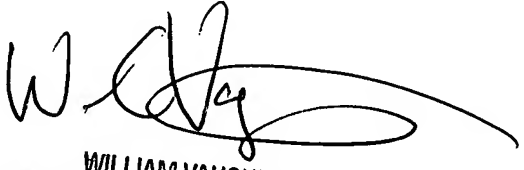examiner can normally be reached Monday to Friday from on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-3922.   Information

regarding the status of an application may be obtained from the Patent Application Information

Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMC

William J. Vaughn

Supervisory Patent Examiner   **August 15, 2007**

WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100